GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:5110
ANSWERED ON:29.04.2008
THERMAL ENERGY FROM OCEAN
Oram Shri Jual

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether there is vast scope to generate thermal energy from the oceans;

(b) if so, the details of the possibilities explored by the National Institute of Ocean Technology (NIOT) during Tenth Plan till date; and

(c) the future plan of the Government in this regard ?

Answer

MINISTER OF SCIENCE & TECHNOLOGY AND MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL)

(a),(b)&(c) Yes, Sir. Energy can be generated utilizing the temperature difference between the surface of the sea and deep sea waters. National Institute of Ocean Technology (NIOT), an autonomous institute under the Ministry undertook a pilot project of 1 MW floating Ocean Thermal energy Conversion (OTEC) Plant under `Jai Vigyan` Mission. The plant was set up on a barge named `Sagar Shakti`, for deployment in open sea having a depth of over 1000 meters off Tuticorin. The 1 Mega Watt (MW) Ocean Thermal Energy Conversion (OTEC) Technology Demonstration project was initially approved as one of the Mission Project of National Institute of Ocean Technology (NIOT) in Sept. 1998 at the total cost of Rs.35.25 crore for a period of two years from 1998-99. However, due to rough weather and inadequate technical support during the deployment of 1 meter diameter and 1000 meter length of pipe, the same could not be supported and resulted in its loss. The Ministry further approved Revised Cost Estimates (RCE) of Rs. 61.13 crores and Extension of the project up to 31st December 2002 on 22.02.02. There was once again loss of the intake pipe. An expert committee was appointed for failure analysis. Based on its report, a revised project proposal was prepared for completion of the project. The proposal was referred to Ministry of Finance for their approval. Ministry of Finance recommended for winding up of the project and the project was accordingly discontinued. Considering the unavailability of required water depth near the Indian coast, the OTEC plants would have to be located 30 to 40 kilometers away from the coast, and therefore, would not be economical. Hence, the Ministry has no plan to take up this project.